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Royal Dancers, Cambodia—Tiered crowns identify their parts as prince (winged epaulets) and princess in beauty-and-beast ballet. They pose for National Geographic photographer J. Baylor Roberts outside throne room of the Royal Palace at Phnom Penh. Cambodia alone of the three Associated States of Indochina remains unscathed in the 1946-54 war with communists (Bulletin No. 1).

GEORGE W. LONG, NATIONAL GEOGRAPHIC STAFF

milling, distilling, brewing, cotton and silk textiles, woolen rugs, bricks and tiles, and leather goods. Only 90 miles from Red China, it is a vital railroad hub. Tanks, soldiers, and refugees crowd its streets. Fighter planes streak its sky.

Haiphong, linked by road and railway to Hanoi 55 miles away, is the chief port of northern Viet Nam, manufacturing cement, glass, china, cotton textiles, buttons, and candles. It is also a center for tin smelting, shipbuilding, and rice milling. Silting threatens the port of this city of 176,000, so a new port is planned at near-by Along Bay.

Both cities owe their importance basically to the Red (Rouge) River, whose delta population runs as high in places as 6,000 to the square mile. The river takes its name from the color of its water, dyed by iron oxide washed from upland soils. Military operations are often hampered by floods, heat, fog, and rain.

In the more recently contested mountain area of northern Laos three names stand out: Luang Prabang, Muong Sai, and Dien Bien Phu. All three towns are embedded in the nearly roadless mountains of northwest Indochina whose heavily wooded ranges and steep canyons encourage hit-and-run tactics.

Along Mekong River—Luang Prabang's business is largely in rice, rubber, cloth, teak, and fish. Amid palm trees, it nestles in the heart of north Laos at the head of navigation on the Mekong, one of the chief waterways of the country. Mist often hangs low over the city.

Though Vientiane, 130 miles south, is the Laotian capital, Luang Prabang is the seat of the palace and court of King Sisavang Vong.

Muong Sai, fortified by the French and 60 miles north of Luang Prabang, proved a thorn in the side of the Laos invaders thrusting toward Luang Prabang until they recently retired northward. This retreat raised French hope that the entire communist invasion of Laos had failed.

Dien Bien Phu, 110 miles northeast of Luang Prabang, is just over the border in Viet Nam. Communists hemming in this French bastion recently were under round-the-clock air and artillery attack.

The war has also scourged another portion of Indochina—its narrow, mountainous waist in central Viet Nam (Annam). There French-led troops have made progress northward along the coast. A railroad parallels the water to facilitate their advance, but the shore line is indented by mountain spurs reaching to the sea. These ramparts cradle deltas of short rivers where rice, cinnamon, cotton, and raw silk are produced.

References—Indochina is shown on the National Geographic Society's map of The Far East. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "Indochina Faces the Dragon," in *The National Geographic Magazine*, September, 1952; "Strife-torn Indochina," October, 1950; and "By Motor Trail Across French Indo-China," October, 1935. *(Issues of The Magazine not more than 12 months old may be obtained by schools and libraries at a specially discounted price of 50¢ a copy. Earlier issues are 65¢ a copy through 1946; $1.00, 1930-1945; $2.00, 1912-1929. Write for prices of issues prior to 1912.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 26, 1953, "Weather May Call Turn in Indochina War"; "Placid Laos Is Newest Asian Battleground," May 11, 1953; and "Indochina Survives Another Summer of War," October 6, 1952.

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UMI

NATIONAL GEOGRAPHIC PHOTOGRAPHER J. BAYLOR ROBERTS

Two-way River—Fishermen's houseboats ride Cambodia's Tonlé Sap River. From November to May it flows into the Mekong. The rest of the year heavy rains swell the Mekong so that the 75-mile-long tributary reverses itself, feeding the Great Lake it normally drains. Indochina's war extends to the Mekong in northern Laos.

Bulletin No. 1, March 29, 1954

Indochina Fights Through Thick and Thin

Toward the East-West conference opening April 26 at Geneva, Switzerland, official French hopes are turned. It could produce a basis for ending war in Indochina, now in its eighth year.

In the meantime fighting continues between French-led Viet Nam and communist Viet Minh forces. It is fighting through thick and thin, speaking populationwise. Its chief battleground is the thickly peopled rice-growing delta of the Red River in northern Viet Nam (Tonkin). Its newest front is the thinly populated back country of northern Laos, west of Tonkin.

Varying Terrain—Problems of military strategy differ greatly between delta thick and mountain thin. The long-embattled delta is dotted with cities, chief of which are Hanoi and Haiphong.

Hanoi's 250,000 people engage in a variety of industries, mainly rice

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

Draw-less London Bridge Halts Large Ships—The five-arched modern span appears in the foreground of this model. Downstream, a vessel passes under the raised bascules of Tower Bridge and enters "the Pool," the busy stretch of the Thames between the bridges.

Hastily recruited defenders in London City met the rebels' challenge in the middle of the span. Bloody fighting between the rows of houses continued fiercely for a day and a night before besiegers were driven back. A few years later in the Wars of the Roses, attackers were again repelled when they tried to conquer the city via the bridge.

In its last two centuries the span gained favor as a shopping center and rialto for Londoners. Shops gradually occupied all the lower stories of the houses on the bridge. It also served as the scene of many famous duels between mounted knights in full armor.

The structure often needed expensive repairs to recover from the violence of man and nature. In the 18th century criticism mounted against this expense and the growing danger to traffic on and under it.

"This pernicious structure has wasted more money in perpetual repairs than would have sufficed to build a dozen safe and commodious bridges," was one complaint.

In 1823 construction was authorized for a replacement for Old London Bridge. In 1831 King William IV opened a five-arch granite bridge 50 yards upstream, and the condemned one was torn down the following year. Less romantic but more practical than its predecessor, that bridge is still the *new* London Bridge, having aged a mere 123 years.

References—London is shown on the Society's map of The British Isles.

See also "In the London of the New Queen," in *The National Geographic Magazine*, September, 1953; "London's Zoo of Zoos," June, 1953; "A Stroll to London," August, 1950; "The British Way," April, 1949; "Founders of Virginia," April, 1948; "Keeping House in London," December, 1947; and numerous other articles listed under London in the *Cumulative Index to the National Geographic Magazine.*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, May 4, 1953, "British Revere Ancient Coronation Seat"; "Tower of London May Hold Buried Treasure," March 16, 1953; and "A New Lord Mayor of London Takes Office," November 3, 1952.

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Bulletin No. 2, March 29, 1954

London Bridge Is Standing Up

For an uneasy moment strollers along the Thames thought they were going to see a nursery rhyme come true. They feared London Bridge would be falling down.

Before their eyes an ocean-going freighter, flung by the tide, crashed against the arches of the historic span. Road traffic was blocked. Shipping lanes jammed.

But London Bridge remained intact. Little actual damage was done.

Served for 523 Years—The bridge has survived far worse troubles in its time. Fire, flood, warfare, and ice jams often ravaged the old structure that served for 523 years until torn down in 1832. Successive disasters took heavy toll of human life.

A bridge has crossed the Thames at the site of London since the region's Roman period of 2,000 years ago, and probably much longer. The famous Old London Bridge of history and romance, however, was begun in 1176 to replace a Saxon wooden span opened in 975.

Completed in 1209, the massive stone crossing was some 920 feet long and had a roadway 20 feet wide. Architecturally it was a hodgepodge, with 18 arches, and piers that ranged in thickness from 25 to 34 feet. The piers dammed so much of the river that each ebb and flow of the tide created eddies, whirlpools, and near-cataracts.

Navigating the narrow channels beneath the arches was dangerous business. Cautious passengers landed while their boatmen "shot the bridge," and were picked up again on the other side. There was an old saying that wise men went over London Bridge and fools under it.

So strong was the tidal flood that mills to grind corn were placed between some piers in the first Elizabeth's time to harness the power. In midstream a drawbridge enabled the passage of larger vessels.

Houses and shops lined both sides of the bridge roadway from shore to shore, the piers extending out to provide their foundations. Occasional open spaces provided room for crowds. The bridge's skyscraper was a stone chapel towering 110 feet near its center and dedicated to London's patron saint, Thomas à Becket.

Landlocked Whale—A fantastic scene is recorded in London's 13th-century history when "a monster of prodigious size" (a whale) explored the river, slipping through the bridge. Sailors caught the creature upstream and killed it with bows and slings.

As early as 1281 five of London Bridge's arches gave way to pack ice. Some say that the song to "my fair lady" was inspired by that event.

Fire struck frequently. The span was new in 1212 when many people lost their lives in its first great fire. In 1633 most of the structures on the upstream side of the bridge burned, and were soon replaced with finer ones. The Great Fire of 1666 spread to London Bridge.

Over the famous crossing in 1381 came Wat Tyler, leading the peasants of Kent and Essex. The Londoners let him come. A few decades later rebel Jack Cade captured Southwick across the river and set the stage for the greatest battle in the history of the bridge.

Village, is one of the country's best examples of architectural revival.

Some thirty 18th-century homes line the elm-vaulted streets of Deerfield, Massachusetts, "a cradle of national character and ideals." Its citizens anticipated the Williamsburg movement by 50 years in forming a Memorial Association to protect and reproduce historic buildings.

In the far West, several mining towns typical of the forty-niners' frontier are being "de-ghosted." These include Virginia City, Nevada, of Comstock Lode fame, and the gold-rush center of Columbia, California. Projects have been launched also at St. Augustine, Florida, oldest city in the United States.

At several points authentic old buildings have been assembled to form "typical" early-American settlements that never actually existed. They are found at Old Sturbridge and Storrowton, Massachusetts; Shelburne, Vermont; and Cooperstown, New York.

Grab Bag of Americana—In this class is Henry Ford's well-known Greenfield Village at Dearborn, Michigan, which recreates the horse-and-buggy era Ford helped to change. Homes and workshops of a number of famous Americans have been moved to the 200-acre community.

Mystic, Connecticut, has been remade into a typical 19th-century New England seaport. Along a water-front street visitors find a sail loft, spar shed, shipsmith's shop, countinghouse, chapel, and school—all brought from other old ports. The *Charles W. Morgan*, last of the old whaling ships, and the square-rigger *Joseph Conrad* are moored there.

Pioneer Village at Salem, Massachusetts, recreated not far from its original location, illustrates the life led by early New England colonists. With only one remaining cabin to start with, Illinois citizens after exhaustive research reconstructed on its original site New Salem, the historic outpost where Abraham Lincoln began his career.

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

References—See also, "Mount Vernon Lives On," in *The National Geographic Magazine*, November, 1953; "Stately Homes of Old Virginia," June, 1953; "Washington's Historic Georgetown," April, 1953; "Mr. Jefferson's Charlottesville," May, 1950; "Literary Landmarks of Massachusetts," March, 1950; "History Repeats in Old Natchez," February, 1949; "Shrines of Each Patriot's Devotion," January, 1949; "Land of the Pilgrims' Pride," August, 1947; and "Restoration of Colonial Williamsburg," April, 1937 (out of print).

Annapolis — Hammond-Harwood House, built in 1774, is the gem of the Maryland capital's many colonial Georgian homes. Carved pine shutters convey part of its charm.

NATIONAL GEOGRAPHIC PHOTOGRAPHERS B. ANTHONY STEWART AND JOHN E. FLETCHER

Georgetown Spirit Runs High—Congress "abolished" Georgetown in 1895, re-established it in 1950 as a well-defined square mile within the much younger District of Columbia. Two citizens' groups work to preserve its colonial character. Here one group examines models of approved small brick dwellings, complete with yards.

Bulletin No. 3, March 29, 1954

Restored Communities Preserve Nation's Past

A score of communities rebuilt out of the Nation's past are helping Americans today to understand their heritage. Enabling tourists to see how their forebears lived, they range from colonial capital to frontier settlement and from seaport to mining town.

Some have been created by assembling old buildings brought from many localities. Others are reproductions, often on original sites. A few comprise restorations of original structures.

Most famous is Williamsburg, political and cultural center of colonial Virginia for almost a century. Nearly $50,000,000 and 27 years of work have restored 82 old buildings and reconstructed more than 340 others. Additional funds have been pledged to carry on the project.

Idea Spreads—The Williamsburg idea has spread far, influencing American architecture and taste. Refurbishing of old homes in Georgetown, D. C., and in near-by Alexandria, Virginia, has brought back an 18th-century atmosphere.

The Independence National Historical Park Project will bring to life buildings of 1776 near Independence Hall in Philadelphia. Annapolis, Maryland, rich in colonial relics, is undertaking large-scale restoration work. A group of buildings in Savannah, Georgia, the Trustees' Garden

All over the world, the clever use of primitive devices proves that "music hath charms to soothe the savage breast."

Anything Goes—In Latin America, each nation has its own assortment of native rhythm makers. Some go back to the old Indian civilizations of the Inca and the Aztec. The Aymará tribesmen of Bolivia wake the echoes of the Andes highlands with the throb of big drums and the wailing of panpipes (rows of reeds bound together).

Among curious examples are rattles of cow horns, deer hoofs, and gourds; bamboo flutes, copper bells, and trumpets made of bark, clay, sea shells, and animal bones.

Through the ages primitive musicians have used what came to hand. The drums that throb in jungle villages, from central Africa and Caribbean isles to the Far East, may be huge calabash shells, hollowed-out tree trunks, or converted pottery jars. On some, buckskin, sheepskin, and lizardskin heads give off the reverberations. Hides of the piglike peccary are popular in South America; in Australia, the wallaby skin plays a part.

Travelers in the Belgian Congo have described "the weird boom of tom-toms"—small drums struck with the hands rather than sticks, while in French West Africa they have reported Malinké tribesmen producing music with elephant-tusk horns and gourd rattles.

Shoeblack Serenade—In South Africa, witnessing tribal dances by native gold-mine workers, visitors noted one dancer who "rattled his own accompaniment with stones in a shoeblacking can."

Many stringed instruments originated in Asia. An ancient contrivance still played in the remote areas of the world is the musical bow. It resembles the arched hunting bow, with a fiber or string stretched its length, and either an attached or separate sound box. Musical bows ranging from 25 feet to a few inches have been found.

Musicians of India draw plaintive melodies from a long-necked stringed instrument whose body is a dried pumpkin. Peruvian shepherds play lingering, melancholy notes through a flute made from the leg bone of a llama—the long-necked burden bearer of the Andes. Australian aborigines strike together two boomerangs, or music sticks, with an intense metallic syncopation.

Another favorite of the bushmen is a leaf from the eucalyptus tree, held to the mouth and blown somewhat as children blow through a blade of grass. When an aborigine chorus sings some ancient ancestral theme through the strangely vibrating gum leaves, the effect is unique in primitive music.

References—For additional information on unusual musical instruments, see "Hunting Musical Game in West Africa," in *The National Geographic Magazine* for August, 1951.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 7, 1949, "Congo Drum-Telegraph Replaced by Radio."

To Meet the Great Demand—a New Printing of "Everyday Life in Ancient Times"

This magnificent volume compiled by the National Geographic Society brings to life the peoples of the ancient lands where Western civilization originated—Mesopotamia, Egypt, Greece, and Rome. Illustrated with 120 full-color paintings by H. M. Herget and written by four noted authorities, the 356-page book is available to schools at $5.00 a copy postpaid in the United States and its possessions, and $5.25 abroad.

UMI

ANTHONY TURNER

Versatile Aymarás "Double in Brass"—In a village band, high in Bolivia's Andes, the piper drums and the drummer pipes. With left hand, each wields the panpipe which gives forth plaintive notes; with right, he beats the drum. Panpipes, used in the Andes in pre-Spanish days, range in size from these to ceremonial ones several feet long. Striped blankets and wool headgear protect from chill winds.

Bulletin No. 4, March 29, 1954

Music Soothes the Savage Breast

A tap on this and a tap on that can produce widely differing results, as every music experimenter knows. In the West Indies a new furore for tapping produces results among the strangest of all.

Islanders with musical inclinations are tapping on steel oil barrels with rubber-tipped sticks, and out pour magic melodies—or violent discords, depending on the hearer's taste.

Enthusiastic "steel bands" are springing up around the Caribbean. Players say their tunes are as true as those of conventional orchestras. Certainly they have a haunting quality all their own.

The steel-barrel instruments are fashioned from discarded oil drums picked up at oil-company warehouses scattered among the islands. The musicians cut the drums with hacksaws to the desired size, and tune them with sledgehammers. With the talent of people who created calypso—the casual West Indies topical ballads now widely popular in the States—they pound indentations on the drum face until they achieve the exact tones they wish their rubber-tipped sticks to produce.

who threatened the established traffic of the Hudson's Bay Company for nearly half a century. Although Henry was not one of the original members, he, too, eventually threw in his lot with the North-West Company.

Washington Irving called the Nor'westers "the lords of the lakes and forests." The wealth they harvested was lordly, and so was the scope of the regions that yielded it. But the partners who made up the North-West Company were no desk barons.

Many paddled the lonely rivers themselves, and shot the turbulent rapids. Snowed in by northern winters, they waited in isolated cabins for dog-train supplies and for the welcome sight of Indians bringing in piles of lustrous fresh-trapped pelts.

Some of the company's pioneers took the toilsome portage and water routes into western areas never before seen by whites. In 1789, Alexander Mackenzie left Fort Chipewyan on Lake Athabaska (northeastern Alberta) to follow the river that would bear his name to its Arctic Ocean outlet. Later he led an expedition across the Rockies all the way to the Pacific. His discoveries have long been recognized as the outstanding achievement of any of the company partners.

Had 78 Posts—Other famous names in the North-West's saga of discovery were Simon Fraser, who explored the great river named for him, and David Thompson, the land geographer who mapped regions from the Great Lakes to the mouth of the Columbia River. Thompson's map of the Canadian northwest, prepared after his retirement from active survey work as a Nor'wester (1812), showed the company's 78 posts, and served as the basis for all later maps of the region.

The company included French Canadians, and American frontiersmen who had trapped and traded along the Mississippi. Most of them, however, were Scottish Highlanders. Some of their fathers had fought with Wolfe's army at Quebec in 1759 or as Loyalists in the American Revolution.

The spirit of adventure and enterprise was not enough, however. Internal struggles for power and expensive law suits sapped the strength of the North-West Company. In 1821, after a period of particularly bitter rivalry with the Hudson's Bay men, the North-West Company was merged with the older organization.

Today many of the long chain of forts built during the Nor'westers' heyday have vanished—as had the remains of Fort Henry before it was unearthed lately in a search with a borrowed army mine detector.

References—Saskatchewan is shown on the Society's map of Canada, Alaska & Greenland.

See also, "Canada Counts Its Caribou," in *The National Geographic Magazine*, August, 1952; "Canada's Caribou Eskimos," January, 1947; "Canada's Awakening North," June, 1936; and "On Mackenzie's Trail to the Polar Sea," August, 1931.

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SASKATCHEWAN VISUAL EDUCATION

In Pioneer Footsteps—Hunters at Missi Lake, northeastern Saskatchewan, have radio, airplane, and countless modern camping conveniences. These were unknown to Mackenzie, Thompson, Henry, the Frobishers, Frasers, McTavishes, and McGillivrays who made history as Canada's fur-trading North-West Company from the 1770's until 1821.

Bulletin No. 5, March 29, 1954

Site of Fort Henry Recalls Fur Battles

Recent discovery of the lost site of Fort Henry in eastern Saskatchewan recalls Canada's North-West Company, its "lords of the lakes and forests," and their adventurous struggles for control of the early fur trade.

The fort was named for the pioneer trader Alexander Henry. Born in New Jersey in 1739, Henry was one of the first to strike out for the wealth of the Canadian wilderness when fur trading resumed after the British took over French Canada in 1759. His field of operation was the Saskatchewan River and its tributaries.

Fort Henry was his headquarters. During his travels in the winter of 1775-76, the trader had joined forces with two other free-lance enterprisers, Benjamin and Joseph Frobisher, brothers from Montreal. With them, he set up an operating base on Beaver Lake along the east-central border of what is now Saskatchewan Province.

Henry described it in his book on trading adventures as a series of "raised buildings round a quadrangle," with "a formidable appearance."

Hudson's Bay Company Rival—Fort Henry, as an experiment in co-operation between individual traders, is considered the birthplace of the famous North-West Company of Montreal. From there the Frobishers went on to help found that ambitious combine of independent fur traders

JACQUES ERTAUD

Watertight TV Enables Archeologists to Direct Deep-sea Excavation

To speed work of salvaging the cargo of pottery from the hull of a 2,200-year-old Greek ship discovered in the Mediterranean near Marseille, scientists of the *Calypso* Oceanographic Expedition enclosed a TV camera in an air-ballasted steel caisson rigged with 6,000-watt light bulbs. Camera's view of a spider crab 140 feet under the surface is transmitted by cable to the TV monitor aboard *Calypso*. Loud speaker in camera enables archeologists to direct Aqualung-equipped divers removing artifacts from wreck.

Captain Jacques-Yves Cousteau (right), expedition leader, sits in his *Calypso* cabin under the flag of the National Geographic Society, co-sponsor of his continuing underwater explorations. He examines a bronze ship nail. Salvaged pottery and fragments of the vessel's lead sheathing lie on the table.

Captain Cousteau's article, "Fish Men Discover a 2,200-year-old Greek Ship," appears in *The National Geographic Magazine* for January, 1954.

HAROLD E. EDGERTON